



RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/993,844

DATE: 03/21/2002
TIME: 10:27:12

Input Set : A:\033072-026.ST25.txt
Output Set: N:\CRF3\03212002\I993844.raw

5 <110> APPLICANT: Oakley, Robert H.
6 Barak, Lawrence S.
7 Laporte, Stephane A.
8 Caron, Marc G.
10 <120> TITLE OF INVENTION: Modified G-Protein Coupled Receptors
12 <130> FILE REFERENCE: 033072-026
14 <140> CURRENT APPLICATION NUMBER: US 09/993,844
15 <141> CURRENT FILING DATE: 2001-11-05
17 <150> PRIOR APPLICATION NUMBER: US 60/245,772
18 <151> PRIOR FILING DATE: 2000-11-03
20 <150> PRIOR APPLICATION NUMBER: US 60/260,363
21 <151> PRIOR FILING DATE: 2001-01-08
23 <160> NUMBER OF SEQ ID NOS: 81
25 <170> SOFTWARE: FastSEQ for Windows Version 4.0
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 371
29 <212> TYPE: PRT
30 <213> ORGANISM: Artificial Sequence
32 <220> FEATURE:
33 <223> OTHER INFORMATION: amino acid sequence of wild-type V2R
35 <400> SEQUENCE: 1
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37 1 5 10 15
38 Pro Ser Leu Pro Ser Asn Ser Ser Gln Glu Arg Pro Leu Asp Thr Arg
39 20 25 30
40 Asp Pro Leu Leu Ala Arg Ala Glu Leu Ala Leu Leu Ser Ile Val Phe
41 35 40 45
42 Val Ala Val Ala Leu Ser Asn Gly Leu Val Leu Ala Ala Leu Ala Arg
43 50 55 60
44 Arg Gly Arg Arg Gly His Trp Ala Pro Ile His Val Phe Ile Gly His
45 65 70 75 80
46 Leu Cys Leu Ala Asp Leu Ala Val Ala Leu Phe Gln Val Leu Pro Gln
47 85 90 95
48 Leu Ala Trp Lys Ala Thr Asp Arg Phe Arg Gly Pro Asp Ala Leu Cys
49 100 105 110
50 Arg Ala Val Lys Tyr Leu Gln Met Val Gly Met Tyr Ala Ser Ser Tyr
51 115 120 125
52 Met Ile Leu Ala Met Thr Leu Asp Arg His Arg Ala Ile Cys Arg Pro
53 130 135 140
54 Met Leu Ala Tyr Arg His Gly Ser Gly Ala His Trp Asn Arg Pro Val
55 145 150 155 160
56 Leu Val Ala Trp Ala Phe Ser Leu Leu Leu Ser Leu Pro Gln Leu Phe
57 165 170 175

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58 Ile Phe Ala Gln Arg Asn Val Glu Gly Gly Ser Gly Val Thr Asp Cys
 59 180 185 190
 60 Trp Ala Cys Phe Ala Glu Pro Trp Gly Arg Arg Thr Tyr Val Thr Trp
 61 195 200 205
 62 Ile Ala Leu Met Val Phe Val Ala Pro Thr Leu Gly Ile Ala Ala Cys
 63 210 215 220
 64 Gln Val Leu Ile Phe Arg Glu Ile His Ala Ser Leu Val Pro Gly Pro
 65 225 230 235 240
 66 Ser Glu Arg Pro Gly Gly Arg Arg Gly Arg Arg Thr Gly Ser Pro
 67 245 250 255
 68 Gly Glu Gly Ala His Val Ser Ala Ala Val Ala Lys Thr Val Arg Met
 69 260 265 270
 70 Thr Leu Val Ile Val Val Val Tyr Val Leu Cys Trp Ala Pro Phe Phe
 71 275 280 285
 72 Leu Val Gln Leu Trp Ala Ala Trp Asp Pro Glu Ala Pro Leu Glu Gly
 73 290 295 300
 74 Ala Pro Phe Val Leu Leu Met Leu Leu Ala Ser Leu Asn Ser Cys Thr
 75 305 310 315 320
 76 Asn Pro Trp Ile Tyr Ala Ser Phe Ser Ser Val Ser Ser Glu Leu
 77 325 330 335
 78 Arg Ser Leu Leu Cys Cys Ala Arg Gly Arg Thr Pro Pro Ser Leu Gly
 79 340 345 350
 80 Pro Gln Asp Glu Ser Cys Thr Thr Ala Ser Ser Ser Leu Ala Lys Asp
 81 355 360 365
 82 Thr Ser Ser
 83 370
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 87 <211> LENGTH: 413
 88 <212> TYPE: PRT
 89 <213> ORGANISM: Artificial Sequence
 91 <220> FEATURE:
 92 <223> OTHER INFORMATION: amino acid sequence of wild-type beta2AR
 94 <400> SEQUENCE: 2
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 96 1 5 10 15
 97 Ser His Ala Pro Asp His Asp Val Thr Gln Gln Arg Asp Glu Val Trp
 98 20 25 30
 99 Val Val Gly Met Gly Ile Val Met Ser Leu Ile Val Leu Ala Ile Val
 100 35 40 45
 101 Phe Gly Asn Val Leu Val Ile Thr Ala Ile Ala Lys Phe Glu Arg Leu
 102 50 55 60
 103 Gln Thr Val Thr Asn Tyr Phe Ile Thr Ser Leu Ala Cys Ala Asp Leu
 104 65 70 75 80
 105 Val Met Gly Leu Ala Val Val Pro Phe Gly Ala Ala His Ile Leu Met
 106 85 90 95
 107 Lys Met Trp Thr Phe Gly Asn Phe Trp Cys Glu Phe Trp Thr Ser Ile
 108 100 105 110
 109 Asp Val Leu Cys Val Thr Ala Ser Ile Glu Thr Leu Cys Val Ile Ala
 110 115 120 125

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111 Val Asp Arg Tyr Phe Ala Ile Thr Ser Pro Phe Lys Tyr Gln Ser Leu
 112 130 135 140
 113 Leu Thr Lys Asn Lys Ala Arg Val Ile Ile Leu Met Val Trp Ile Val
 114 145 150 155 160
 115 Ser Gly Leu Thr Ser Phe Leu Pro Ile Gln Met His Trp Tyr Arg Ala
 116 165 170 175
 117 Thr His Gln Glu Ala Ile Asn Cys Tyr Ala Asn Glu Thr Cys Cys Asp
 118 180 185 190
 119 Phe Phe Thr Asn Gln Ala Tyr Ala Ile Ala Ser Ser Ile Val Ser Phe
 120 195 200 205
 121 Tyr Val Pro Leu Val Ile Met Val Phe Val Tyr Ser Arg Val Phe Gln
 122 210 215 220
 123 Glu Ala Lys Arg Gln Leu Gln Lys Ile Asp Lys Ser Glu Gly Arg Phe
 124 225 230 235 240
 125 His Val Gln Asn Leu Ser Gln Val Glu Gln Asp Gly Arg Thr Gly His
 126 245 250 255
 127 Gly Leu Arg Arg Ser Ser Lys Phe Cys Leu Lys Glu His Lys Ala Leu
 128 260 265 270
 129 Lys Thr Leu Gly Ile Ile Met Gly Thr Phe Thr Leu Cys Trp Leu Pro
 130 275 280 285
 131 Phe Phe Ile Val Asn Ile Val His Val Ile Gln Asp Asn Leu Ile Arg
 132 290 295 300
 133 Lys Glu Val Tyr Ile Leu Leu Asn Trp Ile Gly Tyr Val Asn Ser Gly
 134 305 310 315 320
 135 Phe Asn Pro Leu Ile Tyr Cys Arg Ser Pro Asp Phe Arg Ile Ala Phe
 136 325 330 335
 137 Gln Glu Leu Leu Cys Leu Arg Arg Ser Ser Leu Lys Ala Tyr Gly Asn
 138 340 345 350
 139 Gly Tyr Ser Ser Asn Gly Asn Thr Gly Glu Gln Ser Gly Tyr His Val
 140 355 360 365
 141 Glu Gln Glu Lys Glu Asn Lys Leu Leu Cys Glu Asp Leu Pro Gly Thr
 142 370 375 380
 143 Glu Asp Phe Val Gly His Gln Gly Thr Val Pro Ser Asp Asn Ile Asp
 144 385 390 395 400
 145 Ser Gln Gly Arg Asn Cys Ser Thr Asn Asp Ser Leu Leu
 146 405 410
 149 <210> SEQ ID NO: 3
 150 <211> LENGTH: 370
 151 <212> TYPE: PRT
 152 <213> ORGANISM: Artificial Sequence
 154 <220> FEATURE:
 155 <223> OTHER INFORMATION: amino acid sequence of beta2-AR-V2R chimera
 157 <400> SEQUENCE: 3
 158 Met Gly Gln Pro Gly Asn Gly Ser Ala Phe Leu Leu Ala Pro Asn Arg
 159 1 5 10 15
 160 Ser His Ala Pro Asp His Asp Val Thr Gln Gln Arg Asp Glu Val Trp
 161 20 25 30
 162 Val Val Gly Met Gly Ile Val Met Ser Leu Ile Val Leu Ala Ile Val
 163 35 40 45

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164 Phe Gly Asn Val Leu Val Ile Thr Ala Ile Ala Lys Phe Glu Arg Leu
165      50          55          60
166 Gln Thr Val Thr Asn Tyr Phe Ile Thr Ser Leu Ala Cys Ala Asp Leu
167      65          70          75          80
168 Val Met Gly Leu Ala Val Val Pro Phe Gly Ala Ala His Ile Leu Met
169          85          90          95
170 Lys Met Trp Thr Phe Gly Asn Phe Trp Cys Glu Phe Trp Thr Ser Ile
171          100         105         110
172 Asp Val Leu Cys Val Thr Ala Ser Ile Glu Thr Leu Cys Val Ile Ala
173          115         120         125
174 Val Asp Arg Tyr Phe Ala Ile Thr Ser Pro Phe Lys Tyr Gln Ser Leu
175          130         135         140
176 Leu Thr Lys Asn Lys Ala Arg Val Ile Ile Leu Met Val Trp Ile Val
177      145         150         155         160
178 Ser Gly Leu Thr Ser Phe Leu Pro Ile Gln Met His Trp Tyr Arg Ala
179          165         170         175
180 Thr His Gln Glu Ala Ile Asn Cys Tyr Ala Asn Glu Thr Cys Cys Asp
181          180         185         190
182 Phe Phe Thr Asn Gln Ala Tyr Ala Ile Ala Ser Ser Ile Val Ser Phe
183          195         200         205
184 Tyr Val Pro Leu Val Ile Met Val Phe Val Tyr Ser Arg Val Phe Gln
185      210         215         220
186 Glu Ala Lys Arg Gln Leu Gln Lys Ile Asp Lys Ser Glu Gly Arg Phe
187      225         230         235         240
188 His Val Gln Asn Leu Ser Gln Val Glu Gln Asp Gly Arg Thr Gly His
189          245         250         255
190 Gly Leu Arg Arg Ser Ser Lys Phe Cys Leu Lys Glu His Lys Ala Leu
191          260         265         270
192 Lys Thr Leu Gly Ile Ile Met Gly Thr Phe Thr Leu Cys Trp Leu Pro
193          275         280         285
194 Phe Phe Ile Val Asn Ile Val His Val Ile Gln Asp Asn Leu Ile Arg
195      290         295         300
196 Lys Glu Val Tyr Ile Leu Leu Asn Trp Ile Gly Tyr Val Asn Ser Gly
197      305         310         315         320
198 Phe Asn Pro Leu Ile Tyr Cys Arg Ser Pro Asp Phe Arg Ile Ala Phe
199          325         330         335
200 Gln Glu Leu Leu Cys Ala Arg Gly Arg Thr Pro Pro Ser Leu Gly Pro
201          340         345         350
202 Gln Asp Glu Ser Cys Thr Thr Ala Ser Ser Ser Leu Ala Lys Asp Thr
203          355         360         365
204 Ser Ser
205          370
208 <210> SEQ ID NO: 4
209 <211> LENGTH: 382
210 <212> TYPE: PRT
211 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: amino acid sequence of MOR-V2R chimera expressed
215      from the pEArrB-1/MOR vector

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217 <400> SEQUENCE: 4
 218 Met Asp Ser Ser Thr Gly Pro Gly Asn Thr Ser Asp Cys Ser Asp Pro
 219 1 5 10 15
 220 Leu Ala Gln Ala Ser Cys Ser Pro Ala Pro Gly Ser Trp Leu Asn Leu
 221 20 25 30
 222 Ser His Val Asp Gly Asn Gln Ser Asp Pro Cys Gly Leu Asn Arg Thr
 223 35 40 45
 224 Gly Leu Gly Gly Asn Asp Ser Leu Cys Pro Gln Thr Gly Ser Pro Ser
 225 50 55 60
 226 Met Val Thr Ala Ile Thr Ile Met Ala Leu Tyr Ser Ile Val Cys Val
 227 65 70 75 80
 228 Val Gly Leu Phe Gly Asn Phe Leu Val Met Tyr Val Ile Val Arg Tyr
 229 85 90 95
 230 Thr Lys Met Lys Thr Ala Thr Asn Ile Tyr Ile Phe Asn Leu Ala Leu
 231 100 105 110
 232 Ala Asp Ala Leu Ala Thr Ser Thr Leu Pro Phe Gln Ser Val Asn Tyr
 233 115 120 125
 234 Leu Met Gly Thr Trp Pro Phe Gly Thr Ile Leu Cys Lys Ile Val Ile
 235 130 135 140
 236 Ser Ile Asp Tyr Tyr Asn Met Phe Thr Ser Ile Phe Thr Leu Cys Thr
 237 145 150 155 160
 238 Met Ser Val Asp Arg Tyr Ile Ala Val Cys His Pro Val Lys Ala Leu
 239 165 170 175
 240 Asp Phe Arg Thr Pro Arg Asn Ala Lys Ile Val Asn Val Cys Asn Trp
 241 180 185 190
 242 Ile Leu Ser Ser Ala Ile Gly Leu Pro Val Met Phe Met Ala Thr Thr
 243 195 200 205
 244 Lys Tyr Arg Gln Gly Ser Ile Asp Cys Thr Leu Thr Phe Ser His Pro
 245 210 215 220
 246 Thr Trp Tyr Trp Glu Asn Leu Leu Lys Ile Cys Val Phe Ile Phe Ala
 247 225 230 235 240
 248 Phe Ile Met Pro Ile Leu Ile Ile Thr Val Cys Tyr Gly Leu Met Ile
 249 245 250 255
 250 Leu Arg Leu Lys Ser Val Arg Met Leu Ser Gly Ser Lys Glu Lys Asp
 251 260 265 270
 252 Arg Asn Leu Arg Arg Ile Thr Arg Met Val Leu Val Val Val Ala Val
 253 275 280 285
 254 Phe Ile Val Cys Trp Thr Pro Ile His Ile Tyr Val Ile Ile Lys Ala
 255 290 295 300
 256 Leu Ile Thr Ile Pro Glu Thr Thr Phe Gln Thr Val Ser Trp His Phe
 257 305 310 315 320
 258 Cys Ile Ala Leu Gly Tyr Thr Asn Ser Cys Leu Asn Pro Val Leu Tyr
 259 325 330 335
 260 Ala Phe Leu Asp Glu Asn Phe Lys Arg Cys Phe Arg Glu Phe Cys Ala
 261 340 345 350
 262 Ala Ala Arg Gly Arg Thr Pro Pro Ser Leu Gly Pro Gln Asp Glu Ser
 263 355 360 365
 264 Cys Thr Thr Ala Ser Ser Leu Ala Lys Asp Thr Ser Ser
 265 370 375 380

VERIFICATION SUMMARY

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Input Set : A:\033072-026.ST25.txt

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